

# PROCEEDINGS OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON

## SERIES C. JOURNAL OF MEETINGS

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### ORDINARY MEETING

WEDNESDAY, 1ST OCTOBER, 1952, at 5.30 p.m.

### AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 2nd July, 1952.
2. Recommendations of candidates for Fellowship.
3. Announcement of election of new Fellows.
4. Proposed amendment of the Bye-laws: Special Meeting to be held on 5th November, 1952. Second reading.
5. Additions to the Library. [See page 37.]
6. Admission of Fellows.

Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-laws and attends the meeting on 1st October, 1952, is requested to inform the Secretary before 5.15 p.m. on that date.

7. Paper accepted for publication in the *Transactions*.
8. Exhibits.

**Fellows are particularly requested to bring suitable exhibits to the Meeting even though it may not be possible to announce their intention to do so beforehand.**

*Note.*—To avoid congestion in the Library and to enable exhibits to be displayed to greater advantage, a table has been placed in the meeting-room for this purpose. Fellows are asked to place their exhibits on this table, with a suitable explanatory note, as soon as possible on the afternoon of the meeting, so that they are available for inspection there before the meeting opens.

9. Communications.

**Dr. S. H. Skaife** (a visitor).

A colour film entitled "The Black-Mound Termite of the Cape, *Amitermes atlanticus* Fuller."

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Dr. Skaife, President of the Entomological Society of Southern Africa, now on a visit to this country, has kindly agreed to show his film which is the result of fifteen years' observations on this termite, which has not been studied in detail before.

[ABSTRACT.]

The film deals with the annual cycle of activities of the Black-Mound Termite of the Cape, *Amitermes atlanticus* Fuller, a species that is common on Dr. Skaife's property at Hout Bay and which he has succeeded in keeping in artificial nests. The species belongs to the higher termites, the Termitidæ, but it is not a fungus grower. It feeds on dead wood and decaying vegetation and is of no economic importance, but it is a very convenient subject for study as the colonies are not too large and the soldiers do not attack the human observer when a mound is broken open. The major part of the film consists of enlarged close-ups of the termites at work inside their nests, and in making it Dr. Skaife has been particularly interested in the origin of the three castes of reproductives—the primary or macropterous, the secondary or brachypterous and the tertiary or apterous reproductives. The film also shows some interesting parasites found in the nest of this termite.

The film runs for one and a quarter hours, and Dr. Skaife will give a commentary.

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TEA will be served in the Library before the meeting.

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**Serial Publications in the Library of the Royal Entomological Society of London.**

A list of the serial publications in the Society's Library, with the titles abbreviated in accordance with the *World List of Scientific Periodicals* has now been prepared. Copies may be obtained in the Society's office, price (to Fellows) 3s. 9d.

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**Union Internationale pour l'Etude des Insectes Sociaux.**

A meeting was held in the Society's rooms on Wednesday, 12th March, 1952 (*Proc. R. ent. Soc. Lond.* (C) 17: 7), at which, in response to a request from Professor Grassé and others, the proposal to form a British branch of the above Union was discussed. Dr. J. D. Carthy, of the Department of Zoology, Queen Mary College, Mile End Road, London, E.1, agreed to act provisionally as Secretary, and would be glad to hear from any British biologist who would like to join such an organization. If the necessary response is received, steps will be taken to put the organization on a permanent basis and to nominate officers,



## PROCEEDINGS OF THE ORDINARY MEETING HELD ON 2ND JULY, 1952.

Mr. H. OLDROYD, M.A., Vice-President, in the Chair.

Present 50 Fellows and 16 Visitors.

The minutes of the Ordinary Meeting held on 7th June, 1952, were confirmed and signed by the Vice-President.

The names of the following candidates for election were read for the first time: Professor Johan Wilhelm Geyer, D.Sc.; Professor Elio Lucchese; Mr. Har Kishanlal Sikka; and Mr. Claude Sisley.

For the second time (taken as read): Mr. Snehamoy Chatterji, M.Sc.; Mr. David Franklyn Crosby; Mr. Denis William Ewer; Dr. V. Prabhaker Rao, M.A., D.Sc.; and Major N. S. Vissian.

The Secretary read the names of the following newly elected Fellows of the Society: Dr. Cyril Astley Clarke, M.A., M.D., F.R.C.P., High Close, Thorsway, Caldy, Cheshire; Mr. Gordon Flinders Gross, B.Sc., 76, Highbury Street, Prospect, South Australia; Dr. Daniel Griffin-Warwicke, D.Sc., Selim School, Aden; Mr. Harold Farnham Lower, Waite Agricultural Research Institute, University of Adelaide, Private Mail Bag, G.P.O., Adelaide, South Australia; Monsieur Jacques Nègre, 5, rue Bourdaloue, Paris 9; Mr. Bryan Leonard Sage, 138, Fitzjohn Avenue, High Barnet, Herts; Professor J. Samuel Raj, M.A., M.Sc., F.Z.S., S. D. College, Alleppey, S. India; Mr. Gordon Surtees, 89, The Ridge, Orpington, Kent; Mr. Arthur Thomas Swinscoe, 39, Perth Road, Wood Green, London, N.22; Mr. Errol William Valentine, B.Agr.Sc., Imperial College Field Station, Silwood Park, Sunninghill, Berks; Mrs. Clare Vissian, Post Office Box 104, Selukwe, S. Rhodesia; Mr. John P. Dempster, B.Sc., 6, Southcote Road, Tufnell Park, London, N.19.

Thanks were voted to donors of gifts to the Library since the last meeting.

Dr. J. D. Carthy, Mr. W. S. I. Cox, Mr. J. Green, Mr. D. Guthrie and Mr. M. G. Ridpath signed the Obligation Book and were admitted Fellows of the Society.

In accordance with the Bye-laws, Chapter XXII, Paragraph 1, and Chapter XXV, Paragraph 1, the Secretary read for the first time the notice of a Special Meeting to be held in the Society's rooms on Wednesday, 5th November at 7.0 p.m., to consider and vote upon certain proposed alterations to the Bye-laws. [See p. 35.]

The Chairman drew the attention of Fellows to the exhibit of drawings by Miss Vere Temple displayed in the Library.

Professor P. A. Buxton exhibited a British specimen of the Large Copper Butterfly (*Lycaena dispar* L.). In 1874 his father, the late Alfred F. Buxton, exchanged it with the University Museum at Cambridge for a larva of the Privet Hawk Moth (*Sphinx ligustri* L.) which was wanted for dissection. The specimen was now being returned to the Museum.

Miss Cheesman spoke on the curious swinging habit of *Danaïs chrysippus petilia* Stoll, on Lifu Island. In a favourable breeze the butterflies take a position on the heads of a long-stemmed marguerite, *Tridax procumbens* L., and oscillate rhythmically for long periods. She had counted nine individuals in sight at the same time indulging in this swinging in the wind. Specimens of the butterfly were exhibited.

Mr. P. M. Miles exhibited a series of insects embedded in two kinds of plastic. Full details of the process had been published in *Plant Pathology*, Volume 1, pages 65-68, 1952.



In reply to an enquiry by Mr. Burman, Mr. Miles explained that methyl methacrylate resin dissolved in chloroform was unsuitable for embedding insects, if clear plastic blocks were to be obtained. He then outlined the method he used in preparing his exhibits and emphasised the care that must be taken in the polymerisation of the resin to avoid overheating. He partly polymerised his methyl methacrylate in a flask placed in a water bath maintained at 80° C., completing the polymerisation after the inclusion of the specimen under a glass filter in ultra-violet light.

Professor G. C. Varley communicated a note on the jumping larvae of the weevil *Anthonomus pedicularius* (L.). He said specimens of apparently dead flower buds of hawthorn (*Crataegus monogyna* Jacq.) were sent on 5th June, 1952, to the Hope Department by Master Edward Wells, of Farlington, Portsmouth, who wrote that he "found the buds on the concrete under the may tree. They were jumping in the hot sunshine."

The buds contained weevil larvae, and by 15th June adults of *Anthonomus pedicularius* (L.) had emerged. There seemed to be no mention in the usual beetle books that the larvae of this species live in the flower-buds of *Crataegus*. As with the related *A. pomorum* (L.), which lives in apple flower-buds, the damaged buds fall off early, and are almost spherical. In the case of *A. pedicularius* the warmth of the hand is enough to set the buds leaping about.

This habit appears to be an adaptation whereby the legless larva can dislodge the bud, if it is in a place exposed to full sunshine, so that it may fall to a cooler and moister place and avoid death from heat or desiccation.

Professor Varley also exhibited specimens of jumping Ichneumonid larvae. He said that cocoons of the Ichneumon-fly, *Spudastica kreichbaumeri* Brdgm., formed beside the dead caterpillar host drop to the ground. They are smooth and spherical, and if warmed the contained larvae cause them to jump about.

The bred material was provided by Mr. Austen Richardson, and the host was *Taeniocampa gracilis* Schiff. The live cocoons fell into a tray under an oak tree at Wytham, Berks., in May, 1952.

Mr. D. Leston exhibited specimens of *Hydrometra gracilentia* Horvath (Hemiptera : Hydrometridæ), and said that this species was first added to the British list by Walton in 1938, on specimens taken at Barton Broad, East Norfolk.

The four brachypterous males exhibited were taken on 29th June, 1952, at Sutton Broad, East Norfolk, and were only the second reported capture. He thought it was possibly quite common in the less accessible Norfolk Broad reed swamps.

He had found the species when accompanying Mr. A. E. Gardner on a search for the dragonfly *Coenagrion armatum* Charpentier, which was also at one time known only from Barton Broad, and now occurred at Sutton Broad. Miss Longfield said the dragonfly was a native of Norway and Sweden, and lays its eggs in the soft tissues of the Frog Bit. Possibly the characteristic leaf tissue of the food-plant was the significant factor in the very localized association of these two insects on the Broad.

Professor Buxton pointed out that there was another insect extremely rare in Britain but recorded from the same area. *Anopheles algeriensis* Theobald was taken by F. W. Edwards at Catfield, Waxham and Foulden, all within a few miles of Barton Broad, in 1932. There were no other British records. This species is in general characteristic of the north and south shores of the Mediterranean, but it has been recorded from Krefeld, Germany.

Dr. Peggy Ellis, a visitor, gave a talk on the gregarious behaviour of marching locust hoppers (*Locusta migratoria migratorioides*), an abstract of which appeared on page 28.

In thanking Dr. Ellis, the Chairman recalled a similar habit in the Dipterous family COELOPIDAE, which occurred on beaches in association with seaweed, above which it sometimes formed moving bands flying in one direction.

He also asked whether, when locust hoppers were confined, there was a saturation point above which marching decreased. Dr. Ellis replied that in a cage 1 ft. square marching conditions were optimal with 30 hoppers. When this number was increased there was a very gradual decline in marching activity.

Dr. Cloudsley-Thompson enquired about locust activity in the field at night. He described laboratory experiments at King's College with individual locusts in an actograph. At a constant room temperature they were active at all times of day and night, but most active at dusk and dawn. When in an incubator with an alternating temperature activity was greatest during the warmer periods.

Dr. Ellis replied that no field experiments on hoppers had been done at night, but observations in the laboratory indicated that hoppers moved in darkness, although the movement was random. She also suggested that in the actograph experiments activity might be related to feeding.

Mr. Stower referred to observations he had made on the Red Sea Coast in February and March, 1950, when he found that a band of *S. gregaria* marched 200 yards during a night. The temperature at this time was the lowest recorded on the Red Sea Coast—59° F.

Miss Z. Waloff said that she had observed adult locusts at night and both solitary individuals and swarms moved during the hours of darkness, provided the temperature was suitable.

Referring to Dr. Cloudsley-Thompson's experiments, Professor Varley pointed out that conditions in the incubator were not the same as those in the field, and not enough was known of locust vision to enable definite conclusions to be drawn.

Dr. Cloudsley-Thompson enquired as to the directional effects of hopper contacts. Dr. Ellis replied that, in the laboratory, they resulted in the majority of the movement being anti-clockwise. Too little was yet known to enable any definite opinion to be expressed as to the effect of hopper inter-actions on the direction of movement of bands.

E. B. BRITTON, *Honorary Secretary.*

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The next meeting will be held on 5th November, at 5.30 p.m.

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**Notice of a Special Meeting to be held at 41, Queen's Gate, South Kensington, S.W.7, on Wednesday, 5th November, at 7.0 p.m.**

A Special Meeting will be held on Wednesday, 5th November, to consider and vote upon certain proposed alterations of the Bye-laws, which will be moved from the Chair on behalf of the Council.

*Alteration of Bye-laws.*

*Explanatory Note.*

Council is of the opinion that the Society will benefit by the introduction of a scheme whereby Fellows may, if they wish, pay their Annual Contributions under a seven-year covenant.



Such a scheme, if adopted, may be expected to affect the Society and Fellows as follows :

1. *The Society*.—The Society will, by virtue of its status as a charity, be able to reclaim from the Inland Revenue Authority the sum of £2 17s. 0d. in respect of each Annual Contribution of £3 3s. 0d. paid by a Fellow who has signed the Covenant, and who pays income tax at the standard rate. The Society will give up its right at present held to sue any Fellow for recovery of contributions due. The Society could, however, sue any Fellow who had signed the Covenant and failed to pay his contribution.

2. *Fellows who sign the Covenant*.—These Fellows bind themselves to pay the Annual Contribution for seven years, whether they remain Fellows of the Society or not. If anyone who executes the Covenant ceases to be a Fellow by resignation or removal, he would still be liable for those payments for the rest of the seven years. The Covenantor could be sued by the Society for non-payment after he had ceased to be a Fellow. In the event of the death of a Covenantor, however, his estate would not be liable to continue payment.

3. *Fellows who do not sign the Covenant*.—These Fellows are unaffected.

In order to make possible the introduction of the Covenant Scheme certain amendments to the Bye-laws are necessary, as follows :—

*Proposed Amendments to the Bye-laws :*

1. *Chapter XIV, para. 6*.—"Every Fellow on election shall sign an Obligation for the regular payment of his Annual Contribution, so long as he shall continue a Fellow, and if any Fellow shall not sign such Obligation within six months after his election, the said election shall become void, unless Council shall otherwise decide."

*Amendment*.—The paragraph to be deleted.

2. *Chapter XVI, para. 3*.—"On the first day of September in each year the Council shall cause to be suspended in the Library of the Society a list of the Fellows who owe more than two Annual Contributions. If the Contribution due from any Fellow named in the said list shall not have been paid within three months after the first suspension of the list, the Council may remove such Fellow from the Society, but notwithstanding such removal any Fellow so removed shall continue liable to pay, and may be sued for the recovery of any money due from him to the Society. The Council may cause the name of any Fellow removed under this section, with the reason for his removal, to be printed in the *Proceedings* of the year in which he is removed. The Council may remit wholly, or in part, the contributions due from any Fellow."

*Amendment*.—Delete the words from "but notwithstanding" in the sixth line, to "the Society" in the eighth line.

3. *Chapter XVII, para. 4*.—"No person shall have his name printed in the Annual List of Fellows of the Society until such person shall have paid the Admission Fee and signed the Obligation for the payment of Annual Contributions, and no such person shall have liberty to vote at any election or meeting of the Society before he shall have been admitted as directed in Chapter XIV, Section 4."

*Amendment*.—Delete the words "for the payment of Annual Contributions" in the third and fourth lines, and insert the word "Book" after the word "Obligation."

## ADDITIONS TO THE LIBRARY.

*Presented.*

- Armitt, J. Harold. *Bee-keeping for recreation and profit*. 8vo. Birmingham. 1952. [The Author.]
- Ford, R. L. E. *The Observer's book of the larger British moths*. [The Observer's Pocket Series.] 12mo. London. 1952. [The Publishers.]
- Hesse, Richard. *Ecological animal geography*. Edited by W. C. Allee and Karl P. Schmidt. 2nd edn. 8vo. New York and London. 1951. [The Publishers.]
- Hickin, Norman E. *Caddis. A short account of the biology of British Caddis flies with special reference to the immature stages*. [Field Study Books.] Sq. 8vo. London. 1952. [The Publishers.]

*Purchased.*

- Hansen, V. *Biller Bd. 14. Clavicornia 2 og Bostrychoidea*. [Danmarks Fauna 56.] Sm. 8vo. København. 1951.
- Foster, G. *Lepidoptera of County Down*. *Proc. Belfast Nat. Fld Cl.* 1931-32: 63-92, 1932.
- Hennig, Willi. *Die Larvenformen der Dipteren. 3 Teil*. 8vo. Berlin. 1952.
- Horion, Adolf. *Verzeichnis der Käfer Mitteleuropas. 2 Abt.* 8vo. Stuttgart. 1951.
- Horion, Adolf. *Faunistik der mitteleuropäischen Käfer. Band II. Palpicornia—Staphylinioidea*. Large 8vo. Frankfurt am Main. 1949 [= 1950].
- Stelfox, Arthur Wilson. *A list of the Hymenoptera Aculeata of Ireland*. *Proc. R. Irish Acad.* 37(B): 201-355, 1927.
- World List of Scientific Periodicals. 1900-1950*. 3rd edn. 4to. London. 1952.

In addition, separates have been presented by Mr. E. P. Wiltshire; Anti-Locust Research Centre; Professor P. A. Buxton, C.M.G., F.R.S.; Mr. H. E. Box; Dr. J. L. Cloudsley-Thompson; Mr. D. K. McE. Kevan; Professor V. B. Wigglesworth, C.B.E., F.R.S.; Dr. Saida Symmons; Smithsonian Institution; Mr. D. Leston; The Conservator of Forests, Israel; Department of Entomology, Rothamsted Experimental Station; Mr. A. L. Capener; Mr. H. E. Hammond; Dr. S. H. Skaife; Dr. Hermann Weber; London School of Hygiene and Tropical Medicine; Dr. T. A. M. Nash, O.B.E.; Mr. K. G. V. Smith; and Dr. S. H. Jayewickreme.



## NOTICES

In addition to the *Transactions and Proceedings* (Series A, B and C), the following publications are available on application at the Society's rooms :—

THE GENERIC NAMES OF BRITISH INSECTS, WITH CHECK LISTS OF THE SPECIES, prepared by the Committee on Generic Nomenclature of the Royal Entomological Society of London, with the assistance of the Department of Entomology of the British Museum (Natural History) :—

Part 1. Recommendations relating to the publication of the Committee's Reports								Price	
"	2.	Rhopalocera	..	..	..	..	..	..	6d.
"	3.	Odonata	..	..	..	..	..	..	3s. 6d.
"	4.	Neuroptera	..	..	..	..	..	..	3s. 6d.
"	5.	Hymenoptera Aculeata	..	..	..	..	..	..	15s. 0d.
"	6.	Coleoptera Carabidae	..	..	..	..	..	..	10s. 0d.
"	7.	Coleoptera Hydradephaga	..	..	..	..	..	..	5s. 0d.
"	8.	Hemiptera Heteroptera	..	..	..	..	..	..	39s. 0d.
"	9.	Coleoptera Staphylinidae	..	..	..	..	..	..	40s. 0d.

### HANDBOOKS FOR THE IDENTIFICATION OF BRITISH INSECTS.

The Society has undertaken the issue of a series of publications intended to provide illustrated Keys to the whole of the British Insect Fauna so far as this is possible.

It is proposed to cover this field in a series of ten volumes, arranged as follows :—

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| <p>I. Part 1. General Introduction.</p> <p>" 2. Thysanura.</p> <p>" 3. Protura.</p> <p>" 4. Collembola.*</p> <p>" 5. Dermaptera and Orthoptera.†</p> <p>" 6. Plecoptera.†</p> <p>" 7. Psocoptera.*</p> <p>" 8. Anoplura.</p> <p>II. Hemiptera.*</p> <p>III. Lepidoptera.</p> <p>IV and V. Coleoptera.*</p> <p>VI. Hymenoptera : Symphyta* and Aculeata.*</p> <p>VII. Hymenoptera : Ichneumonicoidea.*</p> <p>VIII. Hymenoptera : Cynipoidea, Chalcidoidea and Serphoidea.</p> <p>IX. Diptera : Nematocera† and Brachycera.</p> | <p>X. Diptera : Cyclorrhapha.*</p> <p>Part 9. Ephemeroptera.†</p> <p>" 10. Odonata.†</p> <p>" 11. Thysanoptera.*</p> <p>" 12. Neuroptera.</p> <p>" 13. Mecoptera.</p> <p>" 14. Trichoptera.</p> <p>" 15. Strepsiptera.</p> <p>" 16. Siphonaptera.</p> |
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The following parts are now available :—

- Vol. I, Part 5. Dermaptera and Orthoptera. By W. D. Hincks. Price 3s. 6d. plus postage.
- Vol. I, Part 6. Plecoptera. By D. E. Kimmins. Price 3s. 6d. plus postage.
- Vol. I, Part 9. Ephemeroptera. By D. E. Kimmins. Price 3s. 6d. plus postage.
- Vol. I, Part 10. Odonata. By F. C. Fraser. Price 7s. 6d. plus postage.
- Vol. VI, Part 2a. Hymenoptera : Symphyta. By R. B. Benson. Price 10s. 6d. plus postage.
- Vol. IX, Part 1. Diptera : Introduction and Key to Families. By H. Oldroyd. Price 7s. 6d. plus postage.
- Vol. IX, Part 2. Diptera, Nematocera : Families TIPULIDAE to CHIRONOMIDAE. By R. L. Coe, Paul Freeman and P. F. Mattingly. Price 20s. 0d. plus postage.

Parts marked † are on sale or in the press, those marked \* in preparation.

Orders for the complete series or for separate parts can be placed with the Registrar at the Society's rooms now, but prices can only be quoted for those parts already issued.

Fellows of the Society may purchase one copy at a discount of 25 per cent. ; additional copies at the full published price.

STYLOPS, a Journal of Taxonomic Entomology.

1932-1935. Vols. 1-4 (all issued). Price £1 16s. 0d. each ; to Fellows £1 7s. 0d.

ABSTRACT OF PROCEEDINGS OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON. 1935. Nos. 1-6 (all issued). 3s. 0d.

HUBNER : A BIBLIOGRAPHICAL AND SYSTEMATIC ACCOUNT OF THE ENTOMOLOGICAL WORKS OF JACOB HUBNER AND THE SUPPLEMENTS THERETO. In 2 vols. By Francis Hemming. Price Vol. 1. 605 pp. £1 15s. 0d. ; Vol. 2. 275 pp. 15s. 0d.

THE HISTORY OF THE ENTOMOLOGICAL SOCIETY OF LONDON, 1833-1933. By S. A. Neave, assisted by F. J. Griffin. Price 10s. 6d.

SERIAL PUBLICATIONS IN THE LIBRARY OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON. 1951. Price 5s. 0d.

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